

SEQUENCE LISTING

<110> CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS)

<120> GLUT-1 AS A RECEPTOR FOR HTLV ENVELOPES AND ITS USES

<130> IOB 03 BG CNR GLUT1

<160> 31

<170> PatentIn version 3.1

<210> 1

<211> 1479

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(1479)

<223>

<400> 1

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1				5					10					15		

gga	gga	gca	gtg	ctt	ggc	tcc	ctg	cag	ttt	ggc	tac	aac	act	gga	gtc	96
Gly	Gly	Ala	Val	Leu	Gly	Ser	Leu	Gln	Phe	Gly	Tyr	Asn	Thr	Gly	Val	
			20					25					30			

atc	aat	gcc	ccc	cag	aag	gtg	atc	gag	gag	ttc	tac	aac	cag	aca	tgg	144
Ile	Asn	Ala	Pro	Gln	Lys	Val	Ile	Glu	Glu	Phe	Tyr	Asn	Gln	Thr	Trp	
		35				40						45				

gtc	cac	cgc	tat	ggg	gag	agc	atc	ctg	ccc	acc	acg	ctc	acc	acg	ctc	192
Val	His	Arg	Tyr	Gly	Glu	Ser	Ile	Leu	Pro	Thr	Thr	Leu	Thr	Thr	Leu	
	50					55					60					

tgg	tcc	ctc	tca	gtg	gcc	atc	ttt	tct	gtt	ggg	ggc	atg	att	ggc	tcc	240
Trp	Ser	Leu	Ser	Val	Ala	Ile	Phe	Ser	Val	Gly	Gly	Met	Ile	Gly	Ser	
65				70					75					80		

ttc	tct	gtg	ggc	ctt	ttc	gtt	aac	cgc	ttt	ggc	cgg	cgg	aat	tca	atg	288
Phe	Ser	Val	Gly	Leu	Phe	Val	Asn	Arg	Phe	Gly	Arg	Arg	Asn	Ser	Met	
			85					90						95		

ctg	atg	atg	aac	ctg	ctg	gcc	ttc	gtg	tcc	gcc	gtg	ctc	atg	ggc	ttc	336
Leu	Met	Met	Asn	Leu	Leu	Ala	Phe	Val	Ser	Ala	Val	Leu	Met	Gly	Phe	
			100					105					110			

tcg	aaa	ctg	ggc	aag	tcc	ttt	gag	atg	ctg	atc	ctg	ggc	cgc	ttc	atc	384
Ser	Lys	Leu	Gly	Lys	Ser	Phe	Glu	Met	Leu	Ile	Leu	Gly	Arg	Phe	Ile	
		115					120					125				

atc	ggt	gtg	tac	tgc	ggc	ctg	acc	aca	ggc	ttc	gtg	ccc	atg	tat	gtg	432
Ile	Gly	Val	Tyr	Cys	Gly	Leu	Thr	Thr	Gly	Phe	Val	Pro	Met	Tyr	Val	
	130					135					140					

ggt gaa gtg tca ccc aca gcc ttt cgt ggg gcc ctg ggc acc ctg cac Gly Glu Val Ser Pro Thr Ala Phe Arg Gly Ala Leu Gly Thr Leu His 145 150 155 160	480
cag ctg ggc atc gtc gtc ggc atc ctc atc gcc cag gtg ttc ggc ctg Gln Leu Gly Ile Val Val Gly Ile Leu Ile Ala Gln Val Phe Gly Leu 165 170 175	528
gac tcc atc atg ggc aac aag gac ctg tgg ccc ctg ctg ctg agc atc Asp Ser Ile Met Gly Asn Lys Asp Leu Trp Pro Leu Leu Leu Ser Ile 180 185 190	576
atc ttc atc ccg gcc ctg ctg cag tgc atc gtg ctg ccc ttc tgc ccc Ile Phe Ile Pro Ala Leu Leu Gln Cys Ile Val Leu Pro Phe Cys Pro 195 200 205	624
gag agt ccc cgc ttc ctg ctc atc aac cgc aac gag gag aac cgg gcc Glu Ser Pro Arg Phe Leu Leu Ile Asn Arg Asn Glu Glu Asn Arg Ala 210 215 220	672
aag agt gtg cta aag aag ctg cgc ggg aca gct gac gtg acc cat gac Lys Ser Val Leu Lys Lys Leu Arg Gly Thr Ala Asp Val Thr His Asp 225 230 235 240	720
ctg cag gag atg aag gaa gag agt cgg cag atg atg cgg gag aag aag Leu Gln Glu Met Lys Glu Glu Ser Arg Gln Met Met Arg Glu Lys Lys 245 250 255	768
gtc acc atc ctg gag ctg ttc cgc tcc ccc gcc tac cgc cag ccc atc Val Thr Ile Leu Glu Leu Phe Arg Ser Pro Ala Tyr Arg Gln Pro Ile 260 265 270	816
ctc atc gct gtg gtg ctg cag ctg tcc cag cag ctg tct ggc atc aac Leu Ile Ala Val Val Leu Gln Leu Ser Gln Gln Leu Ser Gly Ile Asn 275 280 285	864
gct gtc ttc tat tac tcc acg agc atc ttc gag aag gcg ggg gtg cag Ala Val Phe Tyr Tyr Ser Thr Ser Ile Phe Glu Lys Ala Gly Val Gln 290 295 300	912
cag cct gtg tat gcc acc att ggc tcc ggt atc gtc aac acg gcc ttc Gln Pro Val Tyr Ala Thr Ile Gly Ser Gly Ile Val Asn Thr Ala Phe 305 310 315 320	960
act gtc gtg tcg ctg ttt gtg gtg gag cga gca ggc cgg cgg acc ctg Thr Val Val Ser Leu Phe Val Val Glu Arg Ala Gly Arg Arg Thr Leu 325 330 335	1008
cac ctc ata ggc ctc gct ggc atg gcg ggt tgt gcc ata ctc atg acc His Leu Ile Gly Leu Ala Gly Met Ala Gly Cys Ala Ile Leu Met Thr 340 345 350	1056
atc gcg cta gca ctg ctg gag cag cta ccc tgg atg tcc tat ctg agc Ile Ala Leu Ala Leu Leu Glu Gln Leu Pro Trp Met Ser Tyr Leu Ser 355 360 365	1104
atc gtg gcc atc ttt ggc ttt gtg gcc ttc ttt gaa gtg ggt cct gcc Ile Val Ala Ile Phe Gly Phe Val Ala Phe Phe Glu Val Gly Pro Gly 370 375 380	1152

ccc atc cca tgg ttc atc gtg gct gaa ctc ttc agc cag ggt cca cgt 1200
 Pro Ile Pro Trp Phe Ile Val Ala Glu Leu Phe Ser Gln Gly Pro Arg
 385 390 395 400
 cca gct gcc att gcc gtt gca ggc ttc tcc aac tgg acc tca aat ttc 1248
 Pro Ala Ala Ile Ala Val Ala Gly Phe Ser Asn Trp Thr Ser Asn Phe
 405 410 415
 att gtg ggc atg tgc ttc cag tat gtg gag caa ctg tgt ggt ccc tac 1296
 Ile Val Gly Met Cys Phe Gln Tyr Val Glu Gln Leu Cys Gly Pro Tyr
 420 425 430
 gtc ttc atc atc ttc act gtg ctc ctg gtt ctg ttc ttc atc ttc acc 1344
 Val Phe Ile Ile Phe Thr Val Leu Leu Val Leu Phe Phe Ile Phe Thr
 435 440 445
 tac ttc aaa gtt cct gag act aaa ggc cgg acc ttc gat gag atc gct 1392
 Tyr Phe Lys Val Pro Glu Thr Lys Gly Arg Thr Phe Asp Glu Ile Ala
 450 455 460
 tcc ggc ttc cgg cag ggg gga gcc agc caa agt gat aag aca ccc gag 1440
 Ser Gly Phe Arg Gln Gly Gly Ala Ser Gln Ser Asp Lys Thr Pro Glu
 465 470 475 480
 gag ctg ttc cat ccc ctg ggg gct gat tcc caa gtg tga 1479
 Glu Leu Phe His Pro Leu Gly Ala Asp Ser Gln Val
 485 490

<210> 2
 <211> 492
 <212> PRT
 <213> Homo sapiens

<400> 2

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Gly Gly Ala Val Leu Gly Ser Leu Gln Phe Gly Tyr Asn Thr Gly Val
20 25 30

Ile Asn Ala Pro Gln Lys Val Ile Glu Glu Phe Tyr Asn Gln Thr Trp
35 40 45

Val His Arg Tyr Gly Glu Ser Ile Leu Pro Thr Thr Leu Thr Thr Leu
50 55 60

Trp Ser Leu Ser Val Ala Ile Phe Ser Val Gly Gly Met Ile Gly Ser
65 70 75 80

Phe Ser Val Gly Leu Phe Val Asn Arg Phe Gly Arg Arg Asn Ser Met
85 90 95

Leu Met Met Asn Leu Leu Ala Phe Val Ser Ala Val Leu Met Gly Phe
100 105 110

Ser Lys Leu Gly Lys Ser Phe Glu Met Leu Ile Leu Gly Arg Phe Ile
115 120 125

Ile Gly Val Tyr Cys Gly Leu Thr Thr Gly Phe Val Pro Met Tyr Val
130 135 140

Gly Glu Val Ser Pro Thr Ala Phe Arg Gly Ala Leu Gly Thr Leu His
145 150 155 160

Gln Leu Gly Ile Val Val Gly Ile Leu Ile Ala Gln Val Phe Gly Leu
165 170 175

Asp Ser Ile Met Gly Asn Lys Asp Leu Trp Pro Leu Leu Leu Ser Ile
180 185 190

Ile Phe Ile Pro Ala Leu Leu Gln Cys Ile Val Leu Pro Phe Cys Pro
195 200 205

Glu Ser Pro Arg Phe Leu Leu Ile Asn Arg Asn Glu Glu Asn Arg Ala
210 215 220

Lys Ser Val Leu Lys Lys Leu Arg Gly Thr Ala Asp Val Thr His Asp
225 230 235 240

Leu Gln Glu Met Lys Glu Glu Ser Arg Gln Met Met Arg Glu Lys Lys
245 250 255

Val Thr Ile Leu Glu Leu Phe Arg Ser Pro Ala Tyr Arg Gln Pro Ile
260 265 270

Leu Ile Ala Val Val Leu Gln Leu Ser Gln Gln Leu Ser Gly Ile Asn
275 280 285

Ala Val Phe Tyr Tyr Ser Thr Ser Ile Phe Glu Lys Ala Gly Val Gln
290 295 300

Gln Pro Val Tyr Ala Thr Ile Gly Ser Gly Ile Val Asn Thr Ala Phe
305 310 315 320

Thr Val Val Ser Leu Phe Val Val Glu Arg Ala Gly Arg Arg Thr Leu
325 330 335

His Leu Ile Gly Leu Ala Gly Met Ala Gly Cys Ala Ile Leu Met Thr
 340 345 350

Ile Ala Leu Ala Leu Leu Glu Gln Leu Pro Trp Met Ser Tyr Leu Ser
 355 360 365

Ile Val Ala Ile Phe Gly Phe Val Ala Phe Phe Glu Val Gly Pro Gly
 370 375 380

Pro Ile Pro Trp Phe Ile Val Ala Glu Leu Phe Ser Gln Gly Pro Arg
 385 390 395 400

Pro Ala Ala Ile Ala Val Ala Gly Phe Ser Asn Trp Thr Ser Asn Phe
 405 410 415

Ile Val Gly Met Cys Phe Gln Tyr Val Glu Gln Leu Cys Gly Pro Tyr
 420 425 430

Val Phe Ile Ile Phe Thr Val Leu Leu Val Leu Phe Phe Ile Phe Thr
 435 440 445

Tyr Phe Lys Val Pro Glu Thr Lys Gly Arg Thr Phe Asp Glu Ile Ala
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Ser Gly Phe Arg Gln Gly Gly Ala Ser Gln Ser Asp Lys Thr Pro Glu
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Glu Leu Phe His Pro Leu Gly Ala Asp Ser Gln Val
 485 490

<210> 3
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 <212> DNA
 <213> Human T-cell lymphotropic virus type 1

<220>
 <221> CDS
 <222> (1)..(924)
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 Met Gly Lys Phe Leu Ala Thr Leu Ile Leu Phe Phe Gln Phe Cys Pro
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48

ctc atc ctc ggt gat tac agc ccc agc tgc tgt act ctc aca att gga
 Leu Ile Leu Gly Asp Tyr Ser Pro Ser Cys Cys Thr Leu Thr Ile Gly
 20 25 30

96

gtc tcc tca tac cac tct aaa ccc tgc aat cct gcc cag cca gtt tgt	144
Val Ser Ser Tyr His Ser Lys Pro Cys Asn Pro Ala Gln Pro Val Cys	
35 40 45	
tcg tgg acc ctc gac ctg ctg gcc ctt tca gcg gat cag gcc cta cag	192
Ser Trp Thr Leu Asp Leu Leu Ala Leu Ser Ala Asp Gln Ala Leu Gln	
50 55 60	
ccc ccc tgc cct aat cta gta agt tac tcc agc tac cat gcc acc tat	240
Pro Pro Cys Pro Asn Leu Val Ser Tyr Ser Ser Tyr His Ala Thr Tyr	
65 70 75 80	
tcc cta tat cta ttc cct cat tgg att aaa aag cca aac cga aat ggc	288
Ser Leu Tyr Leu Phe Pro His Trp Ile Lys Lys Pro Asn Arg Asn Gly	
85 90 95	
gga ggc tat tat tca gcc tct tat tca gac cct tgt tcc tta aag tgc	336
Gly Gly Tyr Tyr Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Lys Cys	
100 105 110	
cca tac ctg ggg tgc caa tca tgg acc tgc ccc tat aca gga gcc gtc	384
Pro Tyr Leu Gly Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Ala Val	
115 120 125	
tcc agc ccc tac tgg aag ttt cag caa gat gtc aat ttt act caa gaa	432
Ser Ser Pro Tyr Trp Lys Phe Gln Gln Asp Val Asn Phe Thr Gln Glu	
130 135 140	
gtt tca cgc ctc aat att aat ctc cat ttt tca aaa tgc ggt ttt ccc	480
Val Ser Arg Leu Asn Ile Asn Leu His Phe Ser Lys Cys Gly Phe Pro	
145 150 155 160	
ttc tcc ctt cta gtc gac gct cca gga tat gac ccc atc tgg ttc ctt	528
Phe Ser Leu Leu Val Asp Ala Pro Gly Tyr Asp Pro Ile Trp Phe Leu	
165 170 175	
aat acc gaa ccc agc caa ctg cct ccc acc gcc cct cct cta ctc ccc	576
Asn Thr Glu Pro Ser Gln Leu Pro Pro Thr Ala Pro Pro Leu Leu Pro	
180 185 190	
cac tct aac cta gac cac atc ctc gag ccc tct ata cca tgg aaa tca	624
His Ser Asn Leu Asp His Ile Leu Glu Pro Ser Ile Pro Trp Lys Ser	
195 200 205	
aaa ctc ctg acc ctt gtc cag tta acc cta caa agc act aat tat act	672
Lys Leu Leu Thr Leu Val Gln Leu Thr Leu Gln Ser Thr Asn Tyr Thr	
210 215 220	
tgc att gtc tgt atc gat cgt gcc agc cta tcc act tgg cac gtc cta	720
Cys Ile Val Cys Ile Asp Arg Ala Ser Leu Ser Thr Trp His Val Leu	
225 230 235 240	
tac tct ccc aac gtc tct gtt cca tcc tct tct tct acc ccc ctc ctt	768
Tyr Ser Pro Asn Val Ser Val Pro Ser Ser Ser Ser Thr Pro Leu Leu	
245 250 255	
tac cca tcg tta gcg ctt cca gcc ccc cac ctg acg tta cca ttt aac	816
Tyr Pro Ser Leu Ala Leu Pro Ala Pro His Leu Thr Leu Pro Phe Asn	
260 265 270	

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tgg acc cac tgc ttt gac ccc cag att caa gct ata gtc tcc tcc ccc 864
 Trp Thr His Cys Phe Asp Pro Gln Ile Gln Ala Ile Val Ser Ser Pro
 275 280 285

tgt cat aac tcc ctg atc ctg ccc ccc ttt tcc ttg tca cct gtt ccc 912
 Cys His Asn Ser Leu Ile Leu Pro Pro Phe Ser Leu Ser Pro Val Pro
 290 295 300

acc cta gga tcc 924
 Thr Leu Gly Ser
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<210> 4
 <211> 308
 <212> PRT
 <213> Human T-cell lymphotropic virus type 1

<400> 4

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Leu Ile Leu Gly Asp Tyr Ser Pro Ser Cys Cys Thr Leu Thr Ile Gly
 20 25 30

Val Ser Ser Tyr His Ser Lys Pro Cys Asn Pro Ala Gln Pro Val Cys
 35 40 45

Ser Trp Thr Leu Asp Leu Leu Ala Leu Ser Ala Asp Gln Ala Leu Gln
 50 55 60

Pro Pro Cys Pro Asn Leu Val Ser Tyr Ser Ser Tyr His Ala Thr Tyr
 65 70 75 80

Ser Leu Tyr Leu Phe Pro His Trp Ile Lys Lys Pro Asn Arg Asn Gly
 85 90 95

Gly Gly Tyr Tyr Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Lys Cys
 100 105 110

Pro Tyr Leu Gly Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Ala Val
 115 120 125

Ser Ser Pro Tyr Trp Lys Phe Gln Gln Asp Val Asn Phe Thr Gln Glu
 130 135 140

Val Ser Arg Leu Asn Ile Asn Leu His Phe Ser Lys Cys Gly Phe Pro
 145 150 155 160

Phe Ser Leu Leu Val Asp Ala Pro Gly Tyr Asp Pro Ile Trp Phe Leu
165 170 175

Asn Thr Glu Pro Ser Gln Leu Pro Pro Thr Ala Pro Pro Leu Leu Pro
180 185 190

His Ser Asn. Leu Asp His Ile Leu Glu Pro Ser Ile Pro Trp Lys Ser
195 200 205

Lys Leu Leu Thr Leu Val Gln Leu Thr Leu Gln Ser Thr Asn Tyr Thr
210 215 220

Cys Ile Val Cys Ile Asp Arg Ala Ser Leu Ser Thr Trp His Val Leu
225 230 235 240

Tyr Ser Pro Asn Val Ser Val Pro Ser Ser Ser Ser Thr Pro Leu Leu
245 250 255

Tyr Pro Ser Leu Ala Leu Pro Ala Pro His Leu Thr Leu Pro Phe Asn
260 265 270

Trp Thr His Cys Phe Asp Pro Gln Ile Gln Ala Ile Val Ser Ser Pro
275 280 285

Cys His Asn Ser Leu Ile Leu Pro Pro Phe Ser Leu Ser Pro Val Pro
290 295 300

Thr Leu Gly Ser
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<211> 912
<212> DNA
<213> Human T-cell lymphotropic virus type 2
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<222> (1) .. (912)
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1 5 10 15

cca gtc cag cag agc cga tgc aca ctc acg gtt ggt att tcc tcc tac 96
Pro Val Gln Gln Ser Arg Cys Thr Leu Thr Val Gly Ile Ser Ser Tyr
20 25 30

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cac tcc agc ccc tgt agc cca acc caa ccc gtc tgc acg tgg aac ctc	144
His Ser Ser Pro Cys Ser Pro Thr Gln Pro Val Cys Thr Trp Asn Leu	
35 40 45	
gac ctt aat tcc cta acg acg gac cag cga cta cat ccc ccc tgc cct	192
Asp Leu Asn Ser Leu Thr Thr Asp Gln Arg Leu His Pro Pro Cys Pro	
50 55 60	
aac cta att act tac tct ggc ttc cac aaa act tat tcc tta tac tta	240
Asn Leu Ile Thr Tyr Ser Gly Phe His Lys Thr Tyr Ser Leu Tyr Leu	
65 70 75 80	
ttc cca cat tgg ata aag aag cca aat aga cag ggc cta gga tac tac	288
Phe Pro His Trp Ile Lys Lys Pro Asn Arg Gln Gly Leu Gly Tyr Tyr	
85 90 95	
tcg ccc tcc tat aat gac cct tgc tcg cta caa tgc ccc tac tta ggc	336
Ser Pro Ser Tyr Asn Asp Pro Cys Ser Leu Gln Cys Pro Tyr Leu Gly	
100 105 110	
tgc caa tca tgg aca tgc cca tac acg ggc ccc gtc tcc agt cca tcc	384
Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Pro Val Ser Ser Pro Ser	
115 120 125	
tgg aag ttt cac tca gat gta aat ttc acc caa gaa gtc agc caa gtg	432
Trp Lys Phe His Ser Asp Val Asn Phe Thr Gln Glu Val Ser Gln Val	
130 135 140	
tcc ctt cga cta cac ttc tct aag tgc ggc tcc tcc atg acc ctt cta	480
Ser Leu Arg Leu His Phe Ser Lys Cys Gly Ser Ser Met Thr Leu Leu	
145 150 155 160	
gta gat gcc cct gga tat gat cct tta tgg ttc atc acc tca gaa ccc	528
Val Asp Ala Pro Gly Tyr Asp Pro Leu Trp Phe Ile Thr Ser Glu Pro	
165 170 175	
act cag cct ccc cca act cct ccc cca ctg gtc cat gac tcc gac ctt	576
Thr Gln Pro Pro Pro Thr Pro Pro Pro Leu Val His Asp Ser Asp Leu	
180 185 190	
gaa cac gtc cta acc ccc tcc acg tct tgg aca acc aaa atg ctc aag	624
Glu His Val Leu Thr Pro Ser Thr Ser Trp Thr Thr Lys Met Leu Lys	
195 200 205	
ttt atc cag ctg acc ttg cag agc acc aat tac tcc tgc atg gtt tgc	672
Phe Ile Gln Leu Thr Leu Gln Ser Thr Asn Tyr Ser Cys Met Val Cys	
210 215 220	
gtg gat aga tcc agc ctc tca tcc tgg cat gtg ctc tac acc ccc aac	720
Val Asp Arg Ser Ser Leu Ser Ser Trp His Val Leu Tyr Thr Pro Asn	
225 230 235 240	
atc tcc att ccc caa caa acc tcc tcc cga acc atc ctc ttt cct tct	768
Ile Ser Ile Pro Gln Gln Thr Ser Ser Arg Thr Ile Leu Phe Pro Ser	
245 250 255	
ctt gcc ctg ccc gct cct cca ttc caa ccc ttc cct tgg acc cat tgc	816
Leu Ala Leu Pro Ala Pro Pro Phe Gln Pro Phe Pro Trp Thr His Cys	
260 265 270	

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Tyr	Gln	Pro	Arg	Leu	Gln	Ala	Ile	Thr	Thr	Asp	Asp	Cys	Asn	Asn	Ser	
		275					280					285				

att atc ctc ccc cct ttt tcc ctc gcc ccc gta cct cct ccg gcg aca 912
Ile Ile Leu Pro Pro Phe Ser Leu Ala Pro Val Pro Pro Pro Ala Thr
290 295 300

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<210> 6
<211> 304
<212> PRT
<213> Human T-cell lymphotropic virus type 2
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<400> 6

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Pro Val Gln Gln Ser Arg Cys Thr Leu Thr Val Gly Ile Ser Ser Tyr
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His Ser Ser Pro Cys Ser Pro Thr Gln Pro Val Cys Thr Trp Asn Leu
35 40 45

Asp Leu Asn Ser Leu Thr Thr Asp Gln Arg Leu His Pro Pro Cys Pro
50 55 60

Asn Leu Ile Thr Tyr Ser Gly Phe His Lys Thr Tyr Ser Leu Tyr Leu
65 70 75 80

Phe Pro His Trp Ile Lys Lys Pro Asn Arg Gln Gly Leu Gly Tyr Tyr
85 90 95

Ser Pro Ser Tyr Asn Asp Pro Cys Ser Leu Gln Cys Pro Tyr Leu Gly
100 105 110

Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Pro Val Ser Ser Pro Ser
115 120 125

Trp Lys Phe His Ser Asp Val Asn Phe Thr Gln Glu Val Ser Gln Val
130 135 140

Ser Leu Arg Leu His Phe Ser Lys Cys Gly Ser Ser Met Thr Leu Leu
145 150 155 160

Val Asp Ala Pro Gly Tyr Asp Pro Leu Trp Phe Ile Thr Ser Glu Pro
165 170 175

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Thr Gln Pro Pro Pro Thr Pro Pro Pro Leu Val His Asp Ser Asp Leu
180 185 190

Glu His Val Leu Thr Pro Ser Thr Ser Trp Thr Thr Lys Met Leu Lys
195 200 205

Phe Ile Gln Leu Thr Leu Gln Ser Thr Asn Tyr Ser Cys Met Val Cys
210 215 220

Val Asp Arg Ser Ser Leu Ser Ser Trp His Val Leu Tyr Thr Pro Asn
225 230 235 240

Ile Ser Ile Pro Gln Gln Thr Ser Ser Arg Thr Ile Leu Phe Pro Ser
245 250 255

Leu Ala Leu Pro Ala Pro Pro Phe Gln Pro Phe Pro Trp Thr His Cys
260 265 270

Tyr Gln Pro Arg Leu Gln Ala Ile Thr Thr Asp Asp Cys Asn Asn Ser
275 280 285

Ile Ile Leu Pro Pro Phe Ser Leu Ala Pro Val Pro Pro Pro Ala Thr
290 295 300

<210> 7

<211> 1467

<212> DNA

<213> Simian T-cell lymphotropic virus type 1

<220>

<221> CDS

<222> (1)..(1467)

<223>

<400> 7

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ctc att ctc ggt gat tac agc ccc agc tgc tgt act ctc aca att gga 96
Leu Ile Leu Gly Asp Tyr Ser Pro Ser Cys Cys Thr Leu Thr Ile Gly
20 25 30

gtc tcc tca tac ctc tct aaa ccc tgc aat cct gcc cag cca gtt tgt 144
Val Ser Ser Tyr Leu Ser Lys Pro Cys Asn Pro Ala Gln Pro Val Cys
35 40 45

tca tgg acc ctc gac cta ctg gcc ctt tca gca gac caa gcc cta cag 192
Ser Trp Thr Leu Asp Leu Ser Ala Asp Gln Ala Leu Gln
50 55 60

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ccc ccc tgc cct aat cta gta agt tac tcc agc tac cat gcc acc tat	240
Pro Pro Cys Pro Asn Leu Val Ser Tyr Ser Ser Tyr His Ala Thr Tyr	
65 70 75 80	
tcc cta tat cta ttc cct cat tgg att aaa aag cca aac cga aat ggc	288
Ser Leu Tyr Leu Phe Pro His Trp Ile Lys Lys Pro Asn Arg Asn Gly	
85 90 95	
gga ggc tat tat tcg gcc tct tat tca gac cca tgt tct tta aag tgc	336
Gly Gly Tyr Tyr Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Lys Cys	
100 105 110	
cca tac tta ggg tgc caa tca tgg acc tgc ccc tat aca gga gtc gtc	384
Pro Tyr Leu Gly Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Val Val	
115 120 125	
tcc agc ccc tat tgg aaa ttt cag caa gat gtc aat ttt act caa gaa	432
Ser Ser Pro Tyr Trp Lys Phe Gln Gln Asp Val Asn Phe Thr Gln Glu	
130 135 140	
gtt tca cac ctc aat att aat ctc cat ttc tca aaa tgc ggt ttt ccc	480
Val Ser His Leu Asn Ile Asn Leu His Phe Ser Lys Cys Gly Phe Pro	
145 150 155 160	
ttc tcc ctt cta atc gac gct cca gga tat gac ccc atc tgg ttc ctt	528
Phe Ser Leu Leu Ile Asp Ala Pro Gly Tyr Asp Pro Ile Trp Phe Leu	
165 170 175	
aat acc gaa ccc agc caa ctg cct ccc acc gcc cct cct cta ctc ccc	576
Asn Thr Glu Pro Ser Gln Leu Pro Pro Thr Ala Pro Pro Leu Leu Pro	
180 185 190	
cac tct aac ctg gac cac atc ctc gag ccc tct ata cca tgg aaa tca	624
His Ser Asn Leu Asp His Ile Leu Glu Pro Ser Ile Pro Trp Lys Ser	
195 200 205	
aaa ctt ctg act ctt gtc cag cta acc cta caa agc act aat tac act	672
Lys Leu Leu Thr Leu Val Gln Leu Thr Leu Gln Ser Thr Asn Tyr Thr	
210 215 220	
tgc atc gtc tgt ata gac cgt gcc agc ctc tct act tgg cat gtc ctg	720
Cys Ile Val Cys Ile Asp Arg Ala Ser Leu Ser Thr Trp His Val Leu	
225 230 235 240	
tac tct ccc aac gtc tct gtt ccg tcc tct tct tct acc ccc ctc ctt	768
Tyr Ser Pro Asn Val Ser Val Pro Ser Ser Ser Ser Thr Pro Leu Leu	
245 250 255	
tac ccg tcg tta gcg ctt ccagcct ccc cac ctg acg cta cca ttt aac	816
Tyr Pro Ser Leu Ala Leu Pro Ala Pro His Leu Thr Leu Pro Phe Asn	
260 265 270	
tgg acc cac tgc ttt gac ccc cag att caa gct ata gtc tcc tcc ccc	864
Trp Thr His Cys Phe Asp Pro Gln Ile Gln Ala Ile Val Ser Ser Pro	
275 280 285	
tgt cat aac tcc ctc atc ctg ccc ccc ttt tcc ttg tca cct gtt ccc	912
Cys His Asn Ser Leu Ile Leu Pro Pro Phe Ser Leu Ser Pro Val Pro	
290 295 300	

acc cta gga tcc cgc tcc cgc cga gcg gta ccg gtg gcg gtc tgg ctt 960
 Thr Leu Gly Ser Arg Ser Arg Arg Ala Val Pro Val Ala Val Trp Leu
 305 310 315 320

gtc tcc gcc ctg gcc atg gga gcc gga att gct ggc ggg att acc ggc 1008
 Val Ser Ala Leu Ala Met Gly Ala Gly Ile Ala Gly Gly Ile Thr Gly
 325 330 335

tcc atg tcc ctc gcc tca gga aag agc ctc cta cat gag gtg gac aaa 1056
 Ser Met Ser Leu Ala Ser Gly Lys Ser Leu Leu His Glu Val Asp Lys
 340 345 350

gat att tcc caa tta act caa gca ata gtc aaa aac cac aaa aat cta 1104
 Asp Ile Ser Gln Leu Thr Gln Ala Ile Val Lys Asn His Lys Asn Leu
 355 360 365

ctc aaa att gca cag tat gct gcc cag aac agg cga ggc ctt gat ctc 1152
 Leu Lys Ile Ala Gln Tyr Ala Ala Gln Asn Arg Arg Gly Leu Asp Leu
 370 375 380

ctg ttc tgg gag caa gga gga tta tgc aaa gca tta caa gaa cag tgc 1200
 Leu Phe Trp Glu Gln Gly Gly Leu Cys Lys Ala Leu Gln Glu Gln Cys
 385 390 395 400

tgt ttt cta aat att acc aat tcc cat gtc tca ata cta caa gaa aga 1248
 Cys Phe Leu Asn Ile Thr Asn Ser His Val Ser Ile Leu Gln Glu Arg
 405 410 415

ccc ccc ctt gag aat cga gtc ctc act ggc tgg ggc ctt aac tgg gac 1296
 Pro Pro Leu Glu Asn Arg Val Leu Thr Gly Trp Gly Leu Asn Trp Asp
 420 425 430

ctt ggc ctc tca cag tgg gct cga gag gcc tta caa act ggg atc acc 1344
 Leu Gly Leu Ser Gln Trp Ala Arg Glu Ala Leu Gln Thr Gly Ile Thr
 435 440 445

ctt gtt gca cta ctc ctt ctc gtt atc ctt gca gga cca tgc atc ctc 1392
 Leu Val Ala Leu Leu Leu Leu Val Ile Leu Ala Gly Pro Cys Ile Leu
 450 455 460

cgt cag ctg cga cac ctc ccc tcg cgc gtc aga tac ccc cat tat tct 1440
 Arg Gln Leu Arg His Leu Pro Ser Arg Val Arg Tyr Pro His Tyr Ser
 465 470 475 480

ctt ata aac cct gag tca tcc ctg taa 1467
 Leu Ile Asn Pro Glu Ser Ser Leu
 485

<210> 8
 <211> 488
 <212> PRT
 <213> Simian T-cell lymphotropic virus type 1

<400> 8

Met Gly Lys Phe Leu Ala Thr Leu Ile Leu Phe Phe Gln Phe Cys Pro
 1 5 10 15

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Leu Ile Leu Gly Asp Tyr Ser Pro Ser Cys Cys Thr Leu Thr Ile Gly
 20 25 30

Val Ser Ser Tyr Leu Ser Lys Pro Cys Asn Pro Ala Gln Pro Val Cys
 35 40 45

Ser Trp Thr Leu Asp Leu Leu Ala Leu Ser Ala Asp Gln Ala Leu Gln
 50 55 60

Pro Pro Cys Pro Asn Leu Val Ser Tyr Ser Ser Tyr His Ala Thr Tyr
 65 70 75 80

Ser Leu Tyr Leu Phe Pro His Trp Ile Lys Lys Pro Asn Arg Asn Gly
 85 90 95

Gly Gly Tyr Tyr Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Lys Cys
 100 105 110

Pro Tyr Leu Gly Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Val Val
 115 120 125

Ser Ser Pro Tyr Trp Lys Phe Gln Gln Asp Val Asn Phe Thr Gln Glu
 130 135 140

Val Ser His Leu Asn Ile Asn Leu His Phe Ser Lys Cys Gly Phe Pro
 145 150 155 160

Phe Ser Leu Leu Ile Asp Ala Pro Gly Tyr Asp Pro Ile Trp Phe Leu
 165 170 175

Asn Thr Glu Pro Ser Gln Leu Pro Pro Thr Ala Pro Pro Leu Leu Pro
 180 185 190

His Ser Asn Leu Asp His Ile Leu Glu Pro Ser Ile Pro Trp Lys Ser
 195 200 205

Lys Leu Leu Thr Leu Val Gln Leu Thr Leu Gln Ser Thr Asn Tyr Thr
 210 215 220

Cys Ile Val Cys Ile Asp Arg Ala Ser Leu Ser Thr Trp His Val Leu
 225 230 235 240

Tyr Ser Pro Asn Val Ser Val Pro Ser Ser Ser Thr Pro Leu Leu
 245 250 255

Tyr Pro Ser Leu Ala Leu Pro Ala Pro His Leu Thr Leu Pro Phe Asn
260 265 270

Trp Thr His Cys Phe Asp Pro Gln Ile Gln Ala Ile Val Ser Ser Pro
275 280 285

Cys His Asn Ser Leu Ile Leu Pro Pro Phe Ser Leu Ser Pro Val Pro
290 295 300

Thr Leu Gly Ser Arg Ser Arg Arg Ala Val Pro Val Ala Val Trp Leu
305 310 315 320

Val Ser Ala Leu Ala Met Gly Ala Gly Ile Ala Gly Gly Ile Thr Gly
325 330 335

Ser Met Ser Leu Ala Ser Gly Lys Ser Leu Leu His Glu Val Asp Lys
340 345 350

Asp Ile Ser Gln Leu Thr Gln Ala Ile Val Lys Asn His Lys Asn Leu
355 360 365

Leu Lys Ile Ala Gln Tyr Ala Ala Gln Asn Arg Arg Gly Leu Asp Leu
370 375 380

Leu Phe Trp Glu Gln Gly Gly Leu Cys Lys Ala Leu Gln Glu Gln Cys
385 390 395 400

Cys Phe Leu Asn Ile Thr Asn Ser His Val Ser Ile Leu Gln Glu Arg
405 410 415

Pro Pro Leu Glu Asn Arg Val Leu Thr Gly Trp Gly Leu Asn Trp Asp
420 425 430

Leu Gly Leu Ser Gln Trp Ala Arg Glu Ala Leu Gln Thr Gly Ile Thr
435 440 445

Leu Val Ala Leu Leu Leu Val Ile Leu Ala Gly Pro Cys Ile Leu
450 455 460

Arg Gln Leu Arg His Leu Pro Ser Arg Val Arg Tyr Pro His Tyr Ser
465 470 475 480

Leu Ile Asn Pro Glu Ser Ser Leu
485

<210> 9
 <211> 1461
 <212> DNA
 <213> Simian T-cell lymphotropic virus type 2

<220>
 <221> CDS
 <222> (1)..(1461)
 <223>

<400> 9
 atg ggt aag ata att gct ttc ctt tta ttc cat ctt aca tgt atc aca 48
 Met Gly Lys Ile Ile Ala Phe Leu Leu Phe His Leu Thr Cys Ile Thr
 1 5 10 15
 atc act aaa cag agc cgg tgc acg ctt acg gta ggt gtc tcc tcg tat 96
 Ile Thr Lys Gln Ser Arg Cys Thr Leu Thr Val Gly Val Ser Ser Tyr
 20 25 30
 cac tct agt ccc tgc agt ctt gcc caa cct atc tgc acc tgg gat ctc 144
 His Ser Ser Pro Cys Ser Leu Ala Gln Pro Ile Cys Thr Trp Asp Leu
 35 40 45
 gac ctt cat tcc tta act aca gac caa cgt ctg tac cct cca tgc ccc 192
 Asp Leu His Ser Leu Thr Thr Asp Gln Arg Leu Tyr Pro Pro Cys Pro
 50 55 60
 aat cta gtt tct tac tct aac ttc cac aag tcc tac tcc tta tat ttg 240
 Asn Leu Val Ser Tyr Ser Asn Phe His Lys Ser Tyr Ser Leu Tyr Leu
 65 70 75 80
 ttc ccg cac tgg gta aaa aag cca aat aga caa ggc ctg gga tac tat 288
 Phe Pro His Trp Val Lys Lys Pro Asn Arg Gln Gly Leu Gly Tyr Tyr
 85 90 95
 tct gca tcc tac agc gac ccc tgc tcg ctc cag tgc cct tat tta gga 336
 Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Gln Cys Pro Tyr Leu Gly
 100 105 110
 agc cag tct tgg aca tgc cct tac acc ggc ccc atc tcc agc ccg tct 384
 Ser Gln Ser Trp Thr Cys Pro Tyr Thr Gly Pro Ile Ser Ser Pro Ser
 115 120 125
 tgg agg ttc cac cga gat gtt aac ttc acc caa gag gtc aac cat gta 432
 Trp Arg Phe His Arg Asp Val Asn Phe Thr Gln Glu Val Asn His Val
 130 135 140
 acc ctc cgg cta cac ttc tcc cga tgt ggc tct tct atg acc ctc ctc 480
 Thr Leu Arg Leu His Phe Ser Arg Cys Gly Ser Ser Met Thr Leu Leu
 145 150 155 160
 ata gac gcc cca ggc tac gac ccc ctg tgg ttc atc tct tcg gaa ccc 528
 Ile Asp Ala Pro Gly Tyr Asp Pro Leu Trp Phe Ile Ser Ser Glu Pro
 165 170 175
 act cag ccc ccc ccc act tcc cca cca tta gtc cgc gac tct gac ctt 576
 Thr Gln Pro Pro Pro Thr Ser Pro Pro Leu Val Arg Asp Ser Asp Leu
 180 185 190

gaa cat atc tta acc ccc tcc tcc tcc tgg gct act agg atg cta acc Glu His Ile Leu Thr Pro Ser Ser Ser Trp Ala Thr Arg Met Leu Thr 195 200 205	624
ctc atc caa cta act cta caa agt acc aat tat tct tgc atg gtt tgt Leu Ile Gln Leu Thr Leu Gln Ser Thr Asn Tyr Ser Cys Met Val Cys 210 215 220	672
ata gac aga acc agc ttg tgc tcc tgg cac gta ctc tat acc cct aat Ile Asp Arg Thr Ser Leu Ser Ser Trp His Val Leu Tyr Thr Pro Asn 225 230 235 240	720
atc tct gcc tca cct ggg ggc gac tcc ttg cct ata ctt tat ccc tcc Ile Ser Ala Ser Pro Gly Gly Asp Ser Leu Pro Ile Leu Tyr Pro Ser 245 250 255	768
ttg gcc cta ccg gcc ccc caa ccc cag ccg ttt tcc tgg tct cac tgt Leu Ala Leu Pro Ala Pro Gln Pro Gln Pro Phe Ser Trp Ser His Cys 260 265 270	816
tac cag ccc cac cta cag gca gta act aca gcc aat tgc aac aat tcc Tyr Gln Pro His Leu Gln Ala Val Thr Thr Ala Asn Cys Asn Asn Ser 275 280 285	864
att gtc ctg ccc cca ttc tct ctc acc ccg gtg cct tcc cct ggg aca Ile Val Leu Pro Pro Phe Ser Leu Thr Pro Val Pro Ser Pro Gly Thr 290 295 300	912
aga agc cgc cgg gct att cca gtg gct gta tgg ctc gtc tca gcc cta Arg Ser Arg Arg Ala Ile Pro Val Ala Val Trp Leu Val Ser Ala Leu 305 310 315 320	960
gcg gcc ggg act ggt att gca ggg gga ata acc gga tcc ctg tcc cta Ala Ala Gly Thr Gly Ile Ala Gly Gly Ile Thr Gly Ser Leu Ser Leu 325 330 335	1008
gca tca agc cgc agc ctg ctt ttt gaa gtt gac aaa gat att tcc cac Ala Ser Ser Arg Ser Leu Leu Phe Glu Val Asp Lys Asp Ile Ser His 340 345 350	1056
ctc aca caa gcc atc gtt aaa aac cat caa aac atc ctc cgc gta gca Leu Thr Gln Ala Ile Val Lys Asn His Gln Asn Ile Leu Arg Val Ala 355 360 365	1104
caa tat gca gcc caa aat aga aga gga cta gac ctc ctg ttt tgg gaa Gln Tyr Ala Ala Gln Asn Arg Arg Gly Leu Asp Leu Leu Phe Trp Glu 370 375 380	1152
caa gga ggc ctc tgc aaa gcc ata caa gag caa tgt tgc ttc ctt aac Gln Gly Gly Leu Cys Lys Ala Ile Gln Glu Gln Cys Cys Phe Leu Asn 385 390 395 400	1200
atc agc aac acc cat gtg tcc gtc ctt cag gag cgc ccc ccc ctg gaa Ile Ser Asn Thr His Val Ser Val Leu Gln Glu Arg Pro Pro Leu Glu 405 410 415	1248
aag aga gtc atc aca gga tgg ggt ctc aac tgg gac cta ggg cta tcc Lys Arg Val Ile Thr Gly Trp Gly Leu Asn Trp Asp Leu Gly Leu Ser 420 425 430	1296

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caa tgg gca cgg gaa gca ctc caa act ggt ata acc atc cta gcc ttg 1344
 Gln Trp Ala Arg Glu Ala Leu Gln Thr Gly Ile Thr Ile Leu Ala Leu
 435 440 445

ctc ctc ctt gtc ata ctg ttc ggt cct tgt atc ctt cgc caa ctc caa 1392
 Leu Leu Leu Val Ile Leu Phe Gly Pro Cys Ile Leu Arg Gln Leu Gln
 450 455 460

tca ctt ccc cac cgg cta cag aac agg cac aac caa tac tct ctt att 1440
 Ser Leu Pro His Arg Leu Gln Asn Arg His Asn Gln Tyr Ser Leu Ile
 465 470 475 480

aac cag gaa acc aca cta taa 1461
 Asn Gln Glu Thr Thr Leu
 485

<210> 10

<211> 486

<212> PRT

<213> Simian T-cell lymphotropic virus type 2

<400> 10

Met Gly Lys Ile Ile Ala Phe Leu Leu Phe His Leu Thr Cys Ile Thr
 1 5 10 15

Ile Thr Lys Gln Ser Arg Cys Thr Leu Thr Val Gly Val Ser Ser Tyr
 20 25 30

His Ser Ser Pro Cys Ser Leu Ala Gln Pro Ile Cys Thr Trp Asp Leu
 35 40 45

Asp Leu His Ser Leu Thr Thr Asp Gln Arg Leu Tyr Pro Pro Cys Pro
 50 55 60

Asn Leu Val Ser Tyr Ser Asn Phe His Lys Ser Tyr Ser Leu Tyr Leu
 65 70 75 80

Phe Pro His Trp Val Lys Lys Pro Asn Arg Gln Gly Leu Gly Tyr Tyr
 85 90 95

Ser Ala Ser Tyr Ser Asp Pro Cys Ser Leu Gln Cys Pro Tyr Leu Gly
 100 105 110

Ser Gln Ser Trp Thr Cys Pro Tyr Thr Gly Pro Ile Ser Ser Pro Ser
 115 120 125

Trp Arg Phe His Arg Asp Val Asn Phe Thr Gln Glu Val Asn His Val
 130 135 140

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Thr Leu Arg Leu His Phe Ser Arg Cys Gly Ser Ser Met Thr Leu Leu
 145 150 155 160

Ile Asp Ala Pro Gly Tyr Asp Pro Leu Trp Phe Ile Ser Ser Glu Pro
 165 170 175

Thr Gln Pro Pro Pro Thr Ser Pro Pro Leu Val Arg Asp Ser Asp Leu
 180 185 190

Glu His Ile Leu Thr Pro Ser Ser Ser Trp Ala Thr Arg Met Leu Thr
 195 200 205

Leu Ile Gln Leu Thr Leu Gln Ser Thr Asn Tyr Ser Cys Met Val Cys
 210 215 220

Ile Asp Arg Thr Ser Leu Ser Ser Trp His Val Leu Tyr Thr Pro Asn
 225 230 235 240

Ile Ser Ala Ser Pro Gly Gly Asp Ser Leu Pro Ile Leu Tyr Pro Ser
 245 250 255

Leu Ala Leu Pro Ala Pro Gln Pro Gln Pro Phe Ser Trp Ser His Cys
 260 265 270

Tyr Gln Pro His Leu Gln Ala Val Thr Thr Ala Asn Cys Asn Asn Ser
 275 280 285

Ile Val Leu Pro Pro Phe Ser Leu Thr Pro Val Pro Ser Pro Gly Thr
 290 295 300

Arg Ser Arg Arg Ala Ile Pro Val Ala Val Trp Leu Val Ser Ala Leu
 305 310 315 320

Ala Ala Gly Thr Gly Ile Ala Gly Gly Ile Thr Gly Ser Leu Ser Leu
 325 330 335

Ala Ser Ser Arg Ser Leu Leu Phe Glu Val Asp Lys Asp Ile Ser His
 340 345 350

Leu Thr Gln Ala Ile Val Lys Asn His Gln Asn Ile Leu Arg Val Ala
 355 360 365

Gln Tyr Ala Ala Gln Asn Arg Arg Gly Leu Asp Leu Leu Phe Trp Glu
 370 375 380

Gln Gly Gly Leu Cys Lys Ala Ile Gln Glu Gln Cys Cys Phe Leu Asn
385 390 395 400

Ile Ser Asn Thr His Val Ser Val Leu Gln Glu Arg Pro Pro Leu Glu
405 410 415

Lys Arg Val Ile Thr Gly Trp Gly Leu Asn Trp Asp Leu Gly Leu Ser
420 425 430

Gln Trp Ala Arg Glu Ala Leu Gln Thr Gly Ile Thr Ile Leu Ala Leu
435 440 445

Leu Leu Leu Val Ile Leu Phe Gly Pro Cys Ile Leu Arg Gln Leu Gln
450 455 460

Ser Leu Pro His Arg Leu Gln Asn Arg His Asn Gln Tyr Ser Leu Ile
465 470 475 480

Asn Gln Glu Thr Thr Leu
485

<210> 11
<211> 930
<212> DNA
<213> Simian T-cell lymphotropic virus type 3

<220>
<221> CDS
<222> (1)..(930)
<223>

<400> 11
atg ggt aag ttt ggc ctt tat tgt ctt gtt cac ctt tac ata ctt ctc 48
Met Gly Lys Phe Gly Leu Tyr Cys Leu Val His Leu Tyr Ile Leu Leu
1 5 10 15
cct gcc tcc tct ggc aat ccc agt cgg tgc acc ctg ttc ata ggg gcc 96
Pro Ala Ser Ser Gly Asn Pro Ser Arg Cys Thr Leu Phe Ile Gly Ala
20 25 30
tct tcc tac cac tcc agc cct tgc ggg tcc agc ctc cca cgg tgt acc 144
Ser Ser Tyr His Ser Ser Pro Cys Gly Ser Ser Leu Pro Arg Cys Thr
35 40 45
tgg aat ctt gac cta ttc tcc ctc acg aaa gat caa agc cta agc ccc 192
Trp Asn Leu Asp Leu Phe Ser Leu Thr Lys Asp Gln Ser Leu Ser Pro
50 55 60
cca tgt cca gac tta att act tac tca caa tac cac aag ccc tac tcc 240
Pro Cys Pro Asp Leu Ile Thr Tyr Ser Gln Tyr His Lys Pro Tyr Ser
65 70 75 80

ctg tat gta ttc cct cat tgg ata act aaa cct aac cgc cgg ggc tta Leu Tyr Val Phe Pro His Trp Ile Thr Lys Pro Asn Arg Arg Gly Leu 85 90 95	288
ggt tac tat tcc gct tcc tac tca gac ccc tgt gcc ata cag tgc cct Gly Tyr Tyr Ser Ala Ser Tyr Ser Asp Pro Cys Ala Ile Gln Cys Pro 100 105 110	336
tac ctg gga tgc cag tcg tgg aca tgc ccc tat acg ggc ccg gtg tcc Tyr Leu Gly Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Pro Val Ser 115 120 125	384
agt ccg cat tgg aga tac acc tat gat ctt aac ttt acc cag gag gta Ser Pro His Trp Arg Tyr Thr Tyr Asp Leu Asn Phe Thr Gln Glu Val 130 135 140	432
tca tcc gtc tcc tta cac ttg cat ttc tcc aaa tgc gga tcc tcg ttc Ser Ser Val Ser Leu His Leu His Phe Ser Lys Cys Gly Ser Ser Phe 145 150 155 160	480
tcc ttt cta cta gac gca cca gga tat gac cca gtg tgg ttc ctc tcc Ser Phe Leu Leu Asp Ala Pro Gly Tyr Asp Pro Val Trp Phe Leu Ser 165 170 175	528
tcc cag gcc aca cag gct cca ccc aca cct gcc cct ctc ata cgg gac Ser Gln Ala Thr Gln Ala Pro Pro Thr Pro Ala Pro Leu Ile Arg Asp 180 185 190	576
tca gat ctc cag tac att cta gaa ccg ccc att ccg tgg agc tct aag Ser Asp Leu Gln Tyr Ile Leu Glu Pro Pro Ile Pro Trp Ser Ser Lys 195 200 205	624
att ctt aac ctt atc ctc ctc acc cta aaa agc act aac tat tct tgc Ile Leu Asn Leu Ile Leu Thr Leu Lys Ser Thr Asn Tyr Ser Cys 210 215 220	672
atg gtc tgt gtt gac cgc tcc agc cta tcc tca tgg cat gtc ctg tat Met Val Cys Val Asp Arg Ser Ser Leu Ser Ser Trp His Val Leu Tyr 225 230 235 240	720
gga ccc act caa gtc ccc agt cca ccc gac ccc caa gcc cgg tct atc Gly Pro Thr Gln Val Pro Ser Pro Pro Asp Pro Gln Ala Arg Ser Ile 245 250 255	768
ctg cga cct gcc tta gct att ccc gcc agt aat atc acc ccc ccg ttt Leu Arg Pro Ala Leu Ala Ile Pro Ala Ser Asn Ile Thr Pro Pro Phe 260 265 270	816
cct tgg acc cat tgc tat cgc cct cct ccg caa gcc atc tcc tcg gag Pro Trp Thr His Cys Tyr Arg Pro Pro Pro Gln Ala Ile Ser Ser Glu 275 280 285	864
aat tgt aac aac tct gta gtg ctg ccc ccc ttt tct ctg tct cca att Asn Cys Asn Asn Ser Val Val Leu Pro Pro Phe Ser Leu Ser Pro Ile 290 295 300	912
cct aac gtc tcc aga ccc Pro Asn Val Ser Arg Pro 305 310	930

<210> 12
 <211> 310
 <212> PRT
 <213> Simian T-cell lymphotropic virus type 3

<400> 12

Met Gly Lys Phe Gly Leu Tyr Cys Leu Val His Leu Tyr Ile Leu Leu
 1 5 10 15

Pro Ala Ser Ser Gly Asn Pro Ser Arg Cys Thr Leu Phe Ile Gly Ala
 20 25 30

Ser Ser Tyr His Ser Ser Pro Cys Gly Ser Ser Leu Pro Arg Cys Thr
 35 40 45

Trp Asn Leu Asp Leu Phe Ser Leu Thr Lys Asp Gln Ser Leu Ser Pro
 50 55 60

Pro Cys Pro Asp Leu Ile Thr Tyr Ser Gln Tyr His Lys Pro Tyr Ser
 65 70 75 80

Leu Tyr Val Phe Pro His Trp Ile Thr Lys Pro Asn Arg Arg Gly Leu
 85 90 95

Gly Tyr Tyr Ser Ala Ser Tyr Ser Asp Pro Cys Ala Ile Gln Cys Pro
 100 105 110

Tyr Leu Gly Cys Gln Ser Trp Thr Cys Pro Tyr Thr Gly Pro Val Ser
 115 120 125

Ser Pro His Trp Arg Tyr Thr Tyr Asp Leu Asn Phe Thr Gln Glu Val
 130 135 140

Ser Ser Val Ser Leu His Leu His Phe Ser Lys Cys Gly Ser Ser Phe
 145 150 155 160

Ser Phe Leu Leu Asp Ala Pro Gly Tyr Asp Pro Val Trp Phe Leu Ser
 165 170 175

Ser Gln Ala Thr Gln Ala Pro Pro Thr Pro Ala Pro Leu Ile Arg Asp
 180 185 190

Ser Asp Leu Gln Tyr Ile Leu Glu Pro Pro Ile Pro Trp Ser Ser Lys
 195 200 205

Ile Leu Asn Leu Ile Leu Leu Thr Leu Lys Ser Thr Asn Tyr Ser Cys
 210 215 220

Met Val Cys Val Asp Arg Ser Ser Leu Ser Ser Trp His Val Leu Tyr
 225 230 235 240

Gly Pro Thr Gln Val Pro Ser Pro Pro Asp Pro Gln Ala Arg Ser Ile
 245 250 255

Leu Arg Pro Ala Leu Ala Ile Pro Ala Ser Asn Ile Thr Pro Pro Phe
 260 265 270

Pro Trp Thr His Cys Tyr Arg Pro Pro Pro Gln Ala Ile Ser Ser Glu
 275 280 285

Asn Cys Asn Asn Ser Val Val Leu Pro Pro Phe Ser Leu Ser Pro Ile
 290 295 300

Pro Asn Val Ser Arg Pro
 305 310

<210> 13
 <211> 153
 <212> DNA
 <213> Human T-cell lymphotropic virus type 1

<220>
 <221> CDS
 <222> (1)..(153)
 <223>

<400> 13
 att aaa aag cca aac cca aat ggc gga ggc tat tat tta gcc tct tat 48
 ile lys lys pro asn pro asn gly gly gly tyr tyr leu ala ser tyr
 1 5 10 15
 tca gac cct tgt tcc tta aaa tgc cca tac ctg ggc tgc caa tca tgg 96
 ser asp pro cys ser leu lys cys pro tyr leu gly cys gln ser trp
 20 25 30
 acc tgc ccc tat aca gga gcc gtc tcc agc ccc tac tgg aag ttt cag 144
 thr cys pro tyr thr gly ala val ser ser pro tyr trp lys phe gln
 35 40 45
 caa gat gtc 153
 gln asp val
 50

<210> 14
 <211> 51
 <212> PRT
 <213> Human T-cell lymphotropic virus type 1

<400> 14

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Ile Lys Lys Pro Asn Pro Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr
 1 5 10 15

Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
 20 25 30

Thr Cys Pro Tyr Thr Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln
 35 40 45

Gln Asp Val
 50

<210> 15
 <211> 153
 <212> DNA
 <213> Human T-cell lymphotropic virus type 1

<220>
 <221> CDS
 <222> (1)..(153)
 <223>

<400> 15
 gtt aaa aag cca aac cga aat ggc gga ggc tat tat tta gcc tct tat 48
 Val Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr
 1 5 10 15

tca gac cct tgt tcc tta aaa tgc cca tac ctg ggg tgc caa tca tgg 96
 Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
 20 25 30

acc tgc ccc tat aca gga gcc gtc tcc agc ccc tac tgg aag ttt cag 144
 Thr Cys Pro Tyr Thr Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln
 35 40 45

caa gat gtc 153
 Gln Asp Val
 50

<210> 16
 <211> 51
 <212> PRT
 <213> Human T-cell lymphotropic virus type 1

<400> 16

Val Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr
 1 5 10 15

Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
 20 25 30

Thr Cys Pro Tyr Thr Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln
 35 40 45

Gln Asp Val
50

<210> 17
<211> 153
<212> DNA
<213> Human T-cell lymphotropic virus type 1

<220>
<221> CDS
<222> (1)..(153)
<223>

<400> 17
att aaa aag cca aac cga aat ggc gga ggc tat tat tta gcc tct tat 48
Ile Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr
1 5 10 15
tca gac cct tgt tcc tta aaa tgc cca tac ctg ggg tgc caa tca tgg 96
Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
20 25 30
acc tgc ccc tat aca gga gcc gtc tcc agc ccc tac tgg aag ttt caa 144
Thr Cys Pro Tyr Thr Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln
35 40 45
caa gat gtc 153
Gln Asp Val
50

<210> 18
<211> 51
<212> PRT
<213> Human T-cell lymphotropic virus type 1

<400> 18
Ile Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr
1 5 10 15
Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
20 25 30
Thr Cys Pro Tyr Thr Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln
35 40 45

Gln Asp Val
50

<210> 19
<211> 153
<212> DNA
<213> Human T-cell lymphotropic virus type 1

<220>
 <221> CDS
 <222> (1)..(153)
 <223>

<400> 19
 att aaa aag cca aac cga aat ggc gga ggc tat tat tta gcc tct tat 48
 Ile Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr
 1 5 10 15
 tca gac cct tgt tcc tta aaa tgc cca tac ctg ggg tgc caa tca tgg 96
 Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
 20 25 30
 acc tgc ccc tat aca gga ccc gtc tcc agc ccc tac tgg aag ttt cag 144
 Thr Cys Pro Tyr Thr Gly Pro Val Ser Ser Pro Tyr Trp Lys Phe Gln
 35 40 45
 caa gat gtc 153
 Gln Asp Val
 50

<210> 20
 <211> 51
 <212> PRT
 <213> Human T-cell lymphotropic virus type 1

<400> 20
 Ile Lys Lys Pro Asn Arg Asn Gly Gly Gly Tyr Tyr Leu Ala Ser Tyr
 1 5 10 15
 Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
 20 25 30
 Thr Cys Pro Tyr Thr Gly Pro Val Ser Ser Pro Tyr Trp Lys Phe Gln
 35 40 45
 Gln Asp Val
 50

<210> 21
 <211> 171
 <212> DNA
 <213> Human T-cell lymphotropic virus type 1

<220>
 <221> CDS
 <222> (1)..(171)
 <223>

<400> 21
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tca gac cct tgt tcc tta aag tgc cca tac ctg ggg tgc caa tca tgg 96
 Ser Asp Pro Cys Ser Leu Lys Cys Pro Tyr Leu Gly Cys Gln Ser Trp
 20 25 30

acc tgc ccc tat gca gga gcc gtc tcc agc ccc tac tgg aag ttt cag 144
 Thr Cys Pro Tyr Ala Gly Ala Val Ser Ser Pro Tyr Trp Lys Phe Gln
 35 40 45

caa gat gtc aat ttt acc cag gaa gta 171
 Gln Asp Val Asn Phe Thr Gln Glu Val
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aat gac cct tgc tcg cta caa tgc ccc tac ttg ggc tcc caa tca tgg 96
 Asn Asp Pro Cys Ser Leu Gln Cys Pro Tyr Leu Gly Ser Gln Ser Trp
 20 25 30

aca tgc cca tac acg gcc ccc gtc tcc act cca tcc tgg aat ttt cat 144
 Thr Cys Pro Tyr Thr Ala Pro Val Ser Thr Pro Ser Trp Asn Phe His
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Ser Asp Val
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Thr Cys Pro Tyr Thr Ala Pro Val Ser Thr Pro Ser Trp Asn Phe His
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Ser Asp Val
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<400> 26

Asn Gln Thr Trp Val His Arg Tyr Gly Glu Ser Ile Leu Pro Thr Thr
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Leu Thr Thr Leu Trp Ser
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<210> 27
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Lys Ser Phe Glu Met Leu Ile Leu Gly Arg
1 5 10

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<400> 28

Asp Ser Ile Met Gly Asn Lys Asp Leu
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<213> Homo sapiens

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Tyr Ser Thr Ser Ile Phe Glu Lys Ala Gly Val Gln Gln Pro
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<210> 30
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Glu Gln Leu Pro Trp Met Ser Tyr Leu Ser
1 5 10

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<400> 31

Gln Tyr Val Glu Gln Leu Cys
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